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ABSTRACT

This monograph provides a revised list of research hypotheses and questions, a detailed review of psychological and operational definitions of over fifteen vocational contructs (including such ambiguous concepts as vocational stability and vocational satisfaction), and an overview of projected research procedures. In addition, a comprehensive set of appendixes has been included to allow the reader to better understand the measurement tools and procedures used in this research. (Author)

RESEARCH

DISSEMINATION

VOCATIONAL CHOICE & CAREER PLANNING

PAUL R. SALOMONE, DIRECTOR

THE VOCATIONAL CHOICE PROCESS OF NON-PROFESSIONAL WORKERS:

RESEARCH PLAN: REVISED AND OPERATIONALIZED

Paul R. Salomone

Syracuse University

March 1974

MONOGRAPH II

STUDIES IN VOCATIONAL CHOICE AND CAREER PLANNING
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This monograph provides a revised list of research hypotheses and questions, a detailed review of psychological and operational definitions of over fifteen vocational constructs (including such ambiguous concepts as vocational stability and vocational satisfaction), and an overview of projected research procedures. In addition, a comprehensive set of appendixes has been included to allow the reader to better understand the measurement tools and procedures used in this research.

Except for copyrighted matter, professional readers are invited to use any instrument developed by project staff if they will make appropriate reference in their publications and if they will provide the project director with a copy of their completed work.

Readers, and their colleagues, should also note the continued availability of single copies of: a) A summary of the original NIE research proposal and b) Monograph I: The vocational choice process of non-professional workers: A review of Holland's theory and the sociological theories. The dissemination of research process materials and research results is a continuing priority for the project staff.

Finally, we invite critical comments and suggestions from readers, concerning this monograph or other work. We have used such comments and although we've been a bit slow in the past, we promise to give your letter or card prompt attention.

Paul R. Salomone
March, 1974

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CHAPTER I

INTRODUCTION

This research project focuses on the vocational choice process of non-professional workers and will study several vocational constructs which have previously been dimensionalized or have been operationalized as part of the current research. The project combines two major types of research, theoretical research and survey research, by: a) empirically testing the assumptions or propositions of a major existing vocational choice theory (Holland, 1959, 1966, 1973) and b) studying the vocational development process of a group of workers, non-professionals, who have generally been ignored.

The need for an expanded understanding of the vocational choice process of non-professional persons is becoming increasingly clear as vocational counselors, school counselors and other helping professionals are confronted with the necessity of providing guidance to non-college bound youth and to "disadvantaged" persons. In times of limited economic growth when the desirability of a college education may be questioned by some youth, counselors and guidance personnel must be equipped to make sound manpower and training decisions.

Purpose of the Research

It is evident that a need currently exists for research which attempts to broaden the knowledge and understanding of the vocational choice process, to include non-professional workers, through an orderly process of testing the propositions and assumptions of a major choice theory. The need for this research seemed especially urgent since: a) of all of the current vocational choice theories Holland's theory seems to be most amenable to the inclusion of extra-individual factors "whose influence is usually recognized though sidestepped by most theorists" (Carkhuff, et al., 1967) and b) vocational counselors who work with young persons not planning to enter college or with semi-skilled and skilled workers need, as a foundation, a useful, relevant vocational choice theory (Samler, 1968).

The basic purpose of this research project is to assess the validity of Hollands evolving theory of vocational choice and to determine the extent to which this theory can be used to aid non-professional workers and high school students to make sound vocational decisions. The extension and accumulation of basic knowledge regarding the vocational choice process of clerical, skilled, semi-skilled, and unskilled workers will be accomplished through the planned testing of a number of the basic assumptions, propositions and hypotheses which Holland and other researchers have

offered for study and investigation.

In addition to using Holland's theory as a guide to the development of testable hypotheses, components of several sociological theories of occupational choice (Caplow, 1954; Miller & Form, 1951; Ginzberg, et al., 1951) will be used to attempt to explain the vocational behavior of non-professional workers.

The current research will also investigate both the "accident" or "chance" element in the vocational choice process, and the influence of "contingency" factors (Crites, 1969) in the choice process. Besides being asked to provide a detailed description of their work histories, non-professional workers will be asked to outline, in a step-by-step manner, the internal and external factors which influenced vocational decision-making at several critical points in their lives.

CHAPTER II

REVIEW OF LITERATURE

Overview of Monograph I

The purpose of this section is to briefly summarize recent research concerning the usefulness of John Holland's theory in understanding the vocational choices of non-professionals. Section I of Monograph I (Salomone and Shrey, 1973) focused on studies which use working adults as subjects and, to some extent, on studies in which vocational high school students comprise the sample. A review of research on college students was omitted since Holland's (1973) literature review (entitled "Some evidence") is comprehensive and up-to-date. Section II of Monograph I provided a review of sociological viewpoints of the impact which "chance" factors may make on an individual's vocational decision.

Holland's theory (1959), briefly summarized, assumes that at the time of vocational choice, an individual is the product of his heredity and of a wide range of environmental forces. From his experiences the individual develops a hierarchy of orientations for coping with his environment. Each of these personal orientations has its counterparts in environmental settings of different orientations. Thus, the theory proposes that the individual gravitates, so to speak, toward the specific environments which are congruent with his personal orientation hierarchy, or pattern. Holland has identified six model orientations, each of which is composed of characteristic coping patterns, personal traits, educational and vocational patterns, and other attributes. The orientations are termed: Realistic, Investigative, Social, Conventional, Enterprising, and Artistic. Recent research by Holland and his colleagues (1969) has confirmed that the orientations are related psychologically and has demonstrated a spatial relationship, a hexagonal model, as well.

Several other assumptions, of a secondary nature, have also been proposed by Holland and tested by many researchers. They include the concepts of: consistency, congruence, and homogeneity. Consistency refers to the extent of relatedness between pairs of personality types (i.e., Realistic, Social), within an individual, which would be manifested on a personality pattern. An inconsistent pattern is a personality pattern in which the subject indicates a substantial interest for two or three orientations which are not logically compatible. For example, high scores on the Realistic and Social scales, placing them side by side on a pattern code, would indicate that the subject liked occupations and activities which are, normally, mutually exclusive.

Congruence requires the comparison of the personality orientation of an individual and of an environment. Similarity of person-environment types defines congruence, whereas incongruence "occurs when a type lives in an environment that provides opportunities and rewards foreign to the person's preferences and abilities - for instance, a realistic type in a social environment" (Holland, 1973, p. 4-5).

Homogeneity (now termed differentiation) refers to the extent to which a person or environment resembles but a single classification type. The heterogeneous, or less well-differentiated, person has peak scores on several orientations (e.g., VPI scales). Finally, stability of vocational choice refers to the degree to which the worker when changing jobs, stayed in the same field or occupation (a "non-changer"), moved to a major field or occupation in the same type as his original choice (an "intraclass changer"), or moved from an occupation in one type to an occupation in a different type (an "interclass changer") (Holland, 1966).

Holland's recent review of research supports the main proposition of his theory. The personality types Holland describes appear to mature, perceive occupations, seek occupations, make various degrees of changes among occupations, and exhibit behaviors paralleling theoretical expectations. The environmental models Holland outlines appear useful to characterize not only occupations, but also educational environments. Holland's environmental descriptions, established with relation to the six personality types, are clearly consonant with many physical and non-psychological aspects of an environment. Finally, the research evidence indicates, to a limited degree that (as predicted) personality types are influenced by environments.

In general, Salomone and Shrey (1973) found mixed results concerning the validity of Holland's theoretical propositions. There is some evidence that person-environment congruence is related to other important vocational variables (i.e., satisfaction and achievement) and much agreement - across theorists and researchers - that workers search for a vocational environment compatible with their vocational personality which includes needs, interests, orientations, etc. The notion of "occupational fit" or "self-job matching" is an old one and, apparently, still viewed as important and useful.

Other hypothetical assumptions made by Holland (1966, 1973) were less well supported. They include the concept of the "consistency" of a vocational personality, and the interpretation of personality patterns as homogeneous (differentiated) or heterogeneous. Much evidence is noted in Holland's (1973) book to support the basic theory that personal, vocational and environmental orientation can be categor-

ized into six types and that a useful occupational classification system can, thereby, be derived.

Lastly, Monograph I contains a discussion of the varying views and orientations of psychologists and sociologists as they study (or ignore) the impact of environmental influences on the vocational decision-making process of non-professional workers. The discussion includes the notation that chance occurrences and contingency factors (for example, socio-economic status) influence the decision of every individual, but are especially critical to the non-professional. Such workers, more so than others, seem to be affected by non-psychological (i.e., social, economic and chance) circumstances in their lives. They simply do not have the resources, the training opportunities or the experiences to be as much the "prime mover" (Ginzberg, 1972) regarding vocational decisions as do professional, better-educated workers.

CHAPTER III

METHODOLOGY: REVISED

A. Revised Hypotheses and Research Questions

1. Hypotheses: Holland's Theory of Vocational Choice

1. Individuals holding the same (or similar) job titles, regardless of setting, will have similar personality patterns, will describe themselves in similar ways, and will have similar socio-economic histories.
2. The vocational satisfaction of individuals whose personality and environment are congruent will be greater than the vocational satisfaction of persons with limited personality-environment congruence.
3. The vocational stability of persons with substantial congruence between their personality and their environment will be greater than the vocational stability of individuals with limited personality-environmental congruence.
4. The extent of vocational success (achievement) attained by persons with substantial personality-environment congruence will be greater than that attained by individuals with limited personality-environment congruence.
5. There is a significant and positive relationship between: 1) level of vocational satisfaction and degree of vocational stability, 2) level of vocational satisfaction and degree of vocational success, and 3) degree of vocational stability and degree of vocational success.
6. Persons having substantial vocational stability will express a greater degree of vocational satisfaction than persons with limited vocational stability.
7. Workers demonstrating a substantial degree of vocational stability will also show a higher level of vocational success than persons with limited vocational stability.
8. Workers with consistent personality patterns will demonstrate a greater degree of vocational stability than will individuals with inconsistent patterns.
9. Workers with realistic and/or investigative personality patterns will evidence a greater degree of vocational stability than will persons of the other four personality orientations (Holland, 1966).
10. Subjects with consistent personality patterns will express a greater degree of vocational satisfaction than will persons with inconsistent patterns.

11. Individuals with consistent personality patterns will evidence greater levels of vocational success than will persons with inconsistent patterns.
12. Persons with consistent personality patterns will express higher levels of vocational aspirations than will persons with inconsistent patterns.
13. Persons with inconsistent personality patterns will indicate that their vocational choice decisions were determined by environmental factors more frequently than will persons with consistent patterns.
14. Persons with consistent personality patterns whose original vocational choice was thwarted by environmental factors will more often have selected other occupations of the same personality type than individuals with inconsistent patterns.
15. Persons with consistent personality patterns will be more personally competent (i.e., effective, able to cope) than will individuals with inconsistent patterns.
16. Persons with well differentiated personality patterns will be more personally competent than will individuals with poorly differentiated patterns (Holland, 1973).
17. Persons with well differentiated personality patterns will be more vocationally stable than will individuals with poorly differentiated patterns (Holland, 1973).
18. Persons with well differentiated personality patterns will be more vocationally successful than will individuals with poorly differentiated patterns (Holland, 1973).
19. Among individuals with consistent personality patterns, the extent to which environmental (chance) factors influence vocational choice decisions will be a function of the particular personality type which is dominant in the pattern.
20. Vocational aspirations will be positively associated with the model types in the following order: enterprising, social, artistic, investigative, conventional, realistic (Holland, 1973, p. 25).
21. Vocational success (achievement) will be positively associated with the model types in the following order: enterprising, social, artistic, investigative, conventional, realistic (Holland, 1973).

2. Research Questions: Contingency and Chance Factors in Vocational Choice

1. What types of critical life incidents do non-professional, non-managerial

workers identify as having a major impact on their vocational choice decisions?

2. Were the critical incidents specified largely environmental chance occurrences, contingency factors or related to other life events?
3. To what extent do contingency factors influence vocational choice decisions among non-professional workers?
4. To what extent do chance factors influence vocational choice decisions among non-professional workers?
5. What vocational needs (i.e., advancement, authority, independence, compensation, variety, achievement, etc.) are specified as being most important to vocational satisfaction?
6. Given a second opportunity to begin one's vocational life again, and given unlimited financial resources, what changes--in terms of vocational aspiration (levels) and direction--were indicated by the subjects?
7. How similar to a "hoped-for" first choice, in terms of vocational aspirations and direction, was the subject's actual choice?
8. What were the major reasons for job changes?
9. When workers left jobs for reasons of upward mobility, were the new jobs or occupations consistent with the old occupations?
10. How well do self-descriptive adjectives selected by subjects of each personality type agree with personality descriptions which Holland (1973) has applied to his six personality types?

B. Vocational Constructs and Measures: Operational and Psychological Definitions

1. Aspirations - vocational

Vocational or occupational aspiration refers to the vocational choice an individual would consider to be ideal. As Crites (1969) noted, aspirations "almost always refer to the level at which an individual wishes to work", not the type of work or field he wishes to enter. Crites carefully distinguished between vocational choice, preference and aspirations.

> Choice is more realistic than either preference or aspiration, and preference is more realistic than aspiration. In stating an aspiration, the individual indulges in fantasy and conceives of the "merely possible"--what he wishes he could do if he could enter his ideal occupation (Crites, 1969, p. 132).

The Occupational Aspiration Scale (OAS) devised by Miller and Haller (1964) is

designed to determine the individual's Level of Occupational Aspiration (LOA). Vocational aspiration is measured by considering a subject's choice from a list of occupational titles. A respondent's level of occupational aspiration is determined by his choices of short-range and long-range "realistic" occupations, and short-range and long-range "idealistic" occupations. The respondent's total score on the Occupational Aspiration Scale reflects not only his "idealistic" choice of an occupation, but also his "realistic" choice of an occupation.

The OAS is a multiple-choice instrument, originally planned for high school students, which is composed of LOA questions designed to specify idealistic or realistic aspiration levels at short-range and long-range career points. The inventory consists of eight items, each of which refers to a separate list of ten occupational titles, ranked according to prestige. The instrument may be administered to groups or individuals within a 20-minute period. Scoring results may be interpreted as a relative indicator of the prestige level on the occupational hierarchy which an individual views as a goal. The reliability coefficient of the OAS are approximately .80, and the instrument's validity, although it is estimated, appears promising.

The Vocational Aspiration Scale (an abbreviated form of the OAS) consists of four groups of fifteen occupational titles (representing a range of occupational prestige), to which a subject applies one of four questions. Each occupational title has been assigned a NORC (National Opinion Research Center) score. This score was obtained by NORC interviewers (Hodge, et al., 1964) who asked a nationally represented sample of 2,920 adults and youths to rate the prestige of 90 occupations, classifying these occupations as being of 1) excellent standing, 2) good standing, 3) average standing, 4) somewhat below average standing, or 5) poor standing. For the NORC study, a mean score was computed by assigning a value of 100 to each "excellent" rating, 80 to each "good" rating, 60 to each "average" rating, 40 to each "somewhat below average" rating, and 20 to each "poor" rating. For the present study, a measure of vocational aspiration will be computed by summating the NORC scores assigned to each of the occupational titles chosen by the respondent for the four aspiration questions.

Items in the Vocational Aspiration Scale were modified (from the OAS) to make them applicable to non-professional workers. The VAS should take approximately ten minutes to complete. A copy of the Vocational Aspiration Scale can be found in Appendix A.

2. Chance (environmental) factors

Chance or environmental factors are those elements contributing to a vocational choice which have no predictable relationship to vocational choice. Such chance occurrences may affect the individual's vocational choice and his vocational future. Chance factors include: 1) national economic situations, 2) local economic situations, 3) unemployment levels, 4) strikes, 5) wars, 6) unexpected information about job openings, 7) unexpected personal events (including medical, family, etc. situations), 8) national (or local) disasters - floods, hurricanes, etc., 9) unexpected information about training, 10) unexpected financial support, and 11) other unexpected or unpredictable events.

3. Congruency - incongruency

Congruence requires the comparison of the personality orientation of an individual and of an environment. Similarity of person-environment types defines congruence, whereas incongruence "occurs when a type lives in an environment that provides opportunities and rewards foreign to the person's preferences and abilities - for instance, a realistic type in a social environment" (Holland, 1973, p. 4-5).

Congruence of personality pattern and environmental pattern will be assessed by using the Holland, et al. (1969) hexagonal model to compare the worker's VPI code (personality pattern) and the VPI code of his job title (environmental pattern). Holland, et al. (1972) classified 832 occupations obtained from the Purdue Occupational Research Center (McCormick, et al., 1969) and evaluated the relationship of 32 job factors (from Purdue data) with Holland's occupational classification system. One result of the study was that Holland's classification (six environmental types) and the objectives job factors were highly related.

As noted by Holland (1973), the degree of congruence (i.e., the extent of person-environment compatability) can be defined by comparing the relationship of the worker's personality type and his environmental type, using the hexagonal model (Appendix B). Four levels of congruence-incongruence can be assigned. First, high congruence denotes a perfect match (e.g., realistic-realistic) between coded personality pattern and environmental pattern. Second, low congruence denotes a person-environment match such that the two types are in adjoining positions on the hexagonal (e.g., realistic-conventional, or realistic-investigative). Third, low incongruence (a lesser degree of congruence) represents a person-environment match such that the two types occupy distant (but not opposite) positions on the hexagonal.

Finally, high incongruence refers to the situation in which the two types, for the person-environment match, are opposite each other on the hexagonal. The situations of high incongruence are R-S or S-R, I-E or E-I and A-C or C-A.

> The personal and situation characteristics that create a particular degree of congruence can be made explicit by reviewing the formulations for the type and the environment involved. For instance, a social type in a social environment is an extreme case of congruence for many reasons. The social person is provided an opportunity to engage in social activities, to use social competencies, to perform services he values, to see himself as understanding and helpful, and to exhibit personality traits of generosity, friendliness, and sociability. In turn, the social environment reinforces the self-image the social type brings to the environment and rewards him for social values and social personality traits such as generosity, friendliness, and sociability. Of perhaps equal importance, a social type in a social environment can also avoid the activities he dislikes, the demands for competencies he lacks, the tasks and self-images he does not value, and the situations in which his personality traits are not encouraged. (Holland, 1973, p. 38)

4. Consistency - inconsistency

Consistency refers to the extent of relatedness between pairs of personality types (i.e., Realistic, Social), within an individual, which would be manifested on a personality pattern. An inconsistent pattern is a personality pattern in which the subject indicates substantial interest for two or three orientations which are not logically compatible. For example, high scores on the Realistic and Social scales, placing them side by side on a pattern code, would indicate that the subject liked occupations and activities which are, normally, mutually exlcusive.

Thus, to assess the level of consistency of a personality pattern the two VPI scales which receive the S's highest scores are compared with the hexagonal model to determine their position to each other. If these scale-types are adjacent to each other, the pattern is highly consistent. If they are opposite to each other, the pattern is inconsistent (or low consistency). Where the scale-types are neither adjacent nor opposite (e.g., Realistic-Artistic), the pattern has a middle level of consistency.

The following table, taken from Holland (1973, p. 22) identifies the level of consistency for each two-code personality pattern.

Levels of Consistency

Level of Consistency	Personality Patterns
High	RI, EC, IR, IA, AI, AS, SA, SE, ES, EC, CE, CR
Middle	RA, RE, IS, IC, AR, AE, SI, EC, EA, ER, CE, CI
Low	RS, IE, AC, SR, EI, CA

5. Contingency factors

Contingency factors are those elements contributing to an individual's vocational choice which are predictable and can be considered when the individual makes a vocational decision or plans for his vocational future. Contingency factors include all attributes, values and personality factors which, if measured, could potentially contribute to the prediction of vocational choice decisions. Contingency factors include: 1) intelligence level, 2) socioeconomic status (social class), 3) availability of vocational training opportunities, 4) individual's economic and personal eligibility for training, 5) individual's level of awareness concerning vocational opportunities, 6) educational level, 7) sex, 8) religious background, 9) father's occupation, 10) ethnic and/or racial background, 11) perception of family influence, 12) perception of community/cultural influence, 13) financial responsibilities, 14) perceived skills and abilities, 15) perceived occupational accessibility, 16) other personal, measurable traits.

6. Critical Incidents

The critical incident (C.I.) technique was developed by Flanagan (1954) as a method for gathering effective and ineffective incidents of on-the-job behavior from individuals occupying a particular job. Although the purpose of most of the reported research using the C.I. procedure has been the job analysis of various professional and managerial workers (Jacques, 1959; Truax, 1956; Wagner, 1949), a few researchers have adopted the technique for the study of counseling and psychotherapy variables (Eilbert, 1957; Smith, 1954). In essence, the C. I. technique requires the respondent to recall a significant incident, relevant to the variable being

studied, which was most effective (or least effective) for achieving some goal. The supposition underlying the C.I. method is that such critical occurrences will be accurately and easily recalled by the subject. The researcher's task is to then evaluate and categorize the information which is obtained.

Flanagan (1954) emphasized that the C.I. technique "does not consist of a single rigid set of rules governing such data collection. Rather it should be thought of as a flexible set of principles which must be modified and adapted to meet the specific situation at hand" (p. 335). Other essential points that Flanagan made include: 1) the necessity for presenting subjects with clear instructions and tasks, 2) the importance of satisfactorily classifying critical incidents, 3) the acceptability of recalled incidents to provide adequate data and 4) the value of the C.I. technique in (mailed) questionnaires in situations where S's are motivated to read the instructions carefully and answer the questions conscientiously.

In the current study subjects will be asked to list the title of their first full-time job, the job they believe was most satisfying and their current job title. Then they will be asked to describe, in detail, the circumstances at that point in their life which lead them to take the particular job. Last, they will be asked to think about the sequence of jobs they have had and the ways in which they made the decision to take these jobs. "What were the most important events in your life which contributed to the selection of these jobs?" These and other similar questions are included in Section V, Other Vocational Information, in the Background Information Form (Appendix C).

7. Differentiation (homogeneity)

Differentiation refers to the extent to which a person or environment resembles but a single classification type. The well-differentiated person is very similar to individuals of one particular personality type in terms of interests, personal characteristics and typical modes of behavior. The heterogeneous, or less well-differentiated, person resembles many personality types and would have peak scores on several personality type orientations (i.e., VPI scales).

According to Holland (1973, p. 22-23):

> The differentiation of a personality pattern is expressed as a numerical value that equals the absolute difference between a person's highest and lowest VPI scores for the realistic, intellectual, social, conventional, enterprising, and artistic scales. These scale scores can range from 0 to 14. Well-differentiated patterns have sharp peaks and low valleys, whereas poorly differentiated patterns are relatively flat. To some

cited by Holland and Baird (1968), define interpersonal competency as "acquired ability for effective interaction" and indicate that such competency consists of "health, intelligence, empathy, autonomy, judgment and creativity".

White (1959) indicated that the concept of interpersonal competence also includes a "sense" of competence, a feeling of being interpersonally competent. This awareness of one's effectiveness in dealing with others and with the environment, then, is added to the view of competence as behaviorally-related events or consequences. More recently, White (1973) tied the two ideas together by focusing on competence and confidence. "Important in one's sense of self . . . is one's competence in dealing with the relevant environment and one's confidence of being able, when necessary, to have desired effects" (White, 1973, p. 60).

To measure interpersonal competency for the current research, several instruments were used or adapted. They are the: 1) Interpersonal Competency Scale (Holland and Baird, 1968), 2) Anomy Scale (McClosky and Schaar, 1965), 3) Self-Acceptance Scale; abbreviated and modified (Berger, 1952), 4) Internal vs. External Control Scale; abbreviated and modified (Rotter, 1966), and 4) Vocational Maturity Scale; abbreviated and modified (Crites, 1965).

The Interpersonal Competency (IC) Scale was developed to measure the general disposition or capacity of the individual for interpersonal competency. The results of several studies using the IC Scale indicated a strong relationship between interpersonal skills and general psychological health, although it was originally intended to assess one's ability to deal with others, rather than personal effectiveness.

The IC Scale contains twenty true-false items which are interesting and non-offensive. The estimated reliability of the IC Scale, when administered to 6289 male and 6143 female college students, was .69 and .67, respectively. The test-retest reliability for a smaller sample showed results ranging from .63 to .67. Several comprehensive studies of college students, performed for the American College Testing program, provided evidence for concurrent and predictive validity of the IC Scale. A copy of the Interpersonal Competency Scale can be found in Appendix D.

Before evaluating the Anomy Scale (McClosky and Schaar, 1965) it may be well to note that sociologists have traditionally defined "anomy" as a condition of relative normlessness in a society. Merton (1957) believed that anomy was the result of "a breakdown in the cultural structure, occurring particularly when there is an acute disjunction between the cultural norms and goals, and the socially structured capacities of members of the group to act in accord with them" (p. 121). Srole (1956) viewed anomy as a psychological state which refers to "the individual's generalized,

pervasive sense of 'self-to-others belongingness' at one extreme compared with "self-to-others distance' and 'self-to-others alienation' at the other pole of the continuum." He later broadened this conceptualization to include the possibility that anomy might be a function not only of social conditions but also of personality factors.

In a summary statement, McClosky and Schaar (1965) indicated that anomy "may be only one of many symptoms expressing a negativistic, despairing outlook on one's life and on the community in which one lives." They believed that the tendency to perceive society as normless, morally chaotic, and adrift is a function of one's intellectual and personality characteristics. Anomic feelings result when socialization and learning of the norms are impeded. Such personality dispositions also reduce one's chances for effective interaction and communication; one is less personally competent.

The Anomy Scale (Appendix E) contains nine true-false items and was developed at the University of Minnesota as part of a large inventory of scales. The Anomy Scale was designed to measure response to social and political conditions; it places primary emphasis on feelings of normlessness and mal-integration of cultural goals. Reliability was assessed using a Spearman-Brown split-half correlation; the reliability coefficient was .76. A series of concurrent and predictive validity studies provided substantial supportive evidence for the validity of the Anomy Scale.

Berger's (1952) Self Acceptance Scale was developed using a definition of self-acceptance provided in Sheerer's (1949) study. The behavior of a self-acceptant person is characterized by internalized values (rather than external pressure), "a faith in his capacity to cope with life", responsibility, objective acceptance of criticism, sense of self-worth, and an absence of shyness or self-consciousness.

The SA scale includes 36 items related to self-acceptance and 24 items concerned with acceptance of others. The respondent uses a Likert-type scale in which answers range from "Not at all true of myself (1)" to "True of myself (5)". Several groups of college students, and others, were used to assess the reliability and validity of the instrument. Split-half reliabilities of .75-.89 were obtained using the Spearman-Brown formula. Some evidence of construct validity was secured by comparing the SA scores of a group of students with judged self-acceptance ratings of essays which they wrote about themselves. The average correlation was .90.

For the present study, 30 of the 36 Self-Acceptance (Appendix F) items were retained although a few items were reworded to change the direction of the items. In addition, the response mode was changed from the Likert-type format to a True-

False format. This was done partially to standardize the response procedure for the entire, 100 item Personal Opinion Questionnaire.

A modified and abbreviated form of Rotter's (1966) Internal vs. External Control (I-E) Scale was included in this project's "Personal Opinion Questionnaire" (Appendix G) although we recognized the conceptual similarities between "internal control", self acceptance or esteem, and personal competency (Robinson and Shaver, 1969). Whether the measures of these constructs will produce substantial overlapping information remains to be seen, and will be assessed using factor analytic techniques.

One of the key propositions in social learning theory is that reinforcement of a person's behavior will strengthen the expectancy that the particular behavior or event will be rewarded in the future. Individuals come to differ in their perception that certain rewards are determined by chance or by personal skills. According to Rotter (1966),

> People in American culture have developed generalized expectancies in learning situations in regard to whether or not reinforcement, reward or success in these situations is dependent upon their own behavior or is controlled by external sources, particularly luck (and) chance. . . Not only do subjects in general differentiate learning situations as internally or externally determined but individuals differ in a generalized expectancy in how they regard the same situation.

Thus, the notion of internal-external control, simply stated, is that people may differ considerably in their view of the extent to which they have contol over their environment, their success at work or in interpersonal relations, and, in general, their life. The I-E scale purports to measure the orientation of an individual on the dimension of internal vs. external control.

Rotter's I-E Scale contains 29 items, of which six are "filler" items. Each item presents the S with a choice of two opinion statements about a situation. The items deal with the S's belief about the nature of the world. The respondent chooses between the external or internal locus of control statement and his total score is the number of external items he endorsed.

For the present study, Rotter's I-E scale was modified and abbreviated in the following way: a) the "filler" items were dropped, b) 15 items having the highest correlation with the total scale (.24-.48) were chosen from the remaining 23 items, c) the 15 forced choice items were converted to 30 True, False items by using each of the two statements in an I-E item as a separate item, and d) the 30 items were distributed among other items in the project's "Personal Opinion Questionnaire".

In an early, provocative essay, Crites (1961) analyzed various definitions of vocational maturity available at that time and proposed that vocational maturity be defined both by behavior and developmental tasks. The procedure he suggested was to "1) identify an individual's developmental tasks and life stage from his chronological age, and then 2) determine his degree of vocational development within the life stage from his behavior" (p. 258).

In 1965, Crites presented a partial solution to the measurement of vocational maturity in adolescence by publishing the Attitude Test of the Vocational Development Inventory. The Career Maturity Inventory (Crites, 1973) incorporated the VDI and added a maturity Competence Test. This development of the CMI paralleled recent work by Westbrook and Perry-Hill (1973) who stressed the desirability of measuring the cognitive processes involved in making vocationally mature decisions.

For the present study, eleven items of Crites' (1965) VDI, modified for adult use using suggestions by Sheppard (1971), were used (Appendix H). These 11 items were among 15 items of vocational maturity used recently in John Holland's "Life Plans Inventory". The items were distributed systematically throughout the project's "Personal Opinion Questionnaire".

10. Personality patterns

Personality patterns, or profiles, refer to the configuration of scale scores which results from the use of the Vocational Preference Inventory (Holland, 1965) or the Inventory of Occupational Preferences (Salomone, 1972). The results of either inventory can be used to specify the personality type of the respondent, according to Holland's (1973) vocational choice theory.

The Vocational Preference Inventory (Appendix I) contains 160 occupational titles to which the respondent is asked to indicate his like or dislike for the occupation. The VPI serves as both an interest inventory and a personality instrument when it is used to assess personality types in Holland's vocational choice theory. The inventory has eleven scales, six of which are most used in vocational counseling and in researching vocational choice classification, and personality-type issues. These six scales, similar to Holland's orientations, are titled: Realistic, Intellectual, Social, Conventional, Enterprising and Artistic. Holland (1965) noted that:

> The neutral content of the inventory and its form give it the following desirable properties: (1) occupational titles provide subtle stimuli which elicit positive interest and avoid the negative reactions sometimes provoked by "obvious" personality inventories and projective devices with excessive

> ambiguity and threat; (2) occupational content reduces the subject's need to "fake" since this kind of content is usually perceived as having no relation to personal adjustment and (3) the VPI provides at low cost a broad range of reliable information about a subject in a brief testing and scoring time without the need for special scoring or data processing equipment. (p. 1)

The evidence for the VPI's construct validity found in the literature (Holland, 1960, 1961, 1962) as well as the presentation of published and unpublished research in the manual (Holland, 1965) lends substantial support to the continued use, for clinical and research purposes, of this instrument. Similar evidence for the VPI's predictive validity has been found (Holland, 1962), although Holland and Lutz (1967) indicated that the use of the VPI was less effective in predicting a student's vocational choice than simply asking the student to express a vocational choice.

Reliability coefficients of the internal consistency (Kuder-Richardson Formula 21) of the VPI are moderately high. They range, for the six VPI scales of interest (sixth VPI revision) from .76 to .89. The subjects from which the r's were computed consisted of male employed adults who were job applicants (N=103) and college freshmen (males: N=6289; females: N=6143). The test-retest reliability coefficients vary depending upon the length of time between VPI administrations. The correlation range for a time lapse of six weeks is .74 to .98; for one year: .61 to .86; for four years: .45 to .61. The samples for these correlations include male and female National Merit Scholarship finalists, college freshmen and college seniors.

The Inventory of Occupational Preferences (Appendix J) was constructed by Salomone (1972) using non-professional and non-managerial titles from six sources: (1) the Dictionary of Occupational Titles (U.S. Employment Service, 1965); (2) the Occupational Outlook Handbook (U.S. Department of Labor, 1969); (3) the Classified Index of Occupations and Industries (U.S. Department of Labor, 1966); (4) The Job Guide for Young Workers (U.S. Department of Labor, 1963-1964); (5) a book by John Holland - The Psychology of Vocational Choice (1966); and (6) group discussion among research assistants in the Rehabilitation Counselor Education program at Syracuse University.

Thirty job titles in each of Holland's six classifications were selected. Occupations which were likely to be familiar to most of the target group were included. Those occupations which are designated as professional or managerial according to the Dictionary of Occupational Titles (U.S.E.S., 1965) or the general educational development level (GED) were not included in the IOP. Confusing job titles were

avoided in the construction of the IOP (such as Masseur, Statistician, Speculator in Holland's VPI). Additionally, the 180 items were randomly arranged in the inventory to control for order effect.

Another major difference between the Inventory of Occupational Preferences (IOP) and the VPI is the administration directions given to subjects. The VPI directions ask a subject to show which occupations: "interest or appeal to you," or "you dislike or find uninteresting." Subjects are asked to make no marks when undecided about an occupation. The IOP, on the other hand, carefully distinguishes "interest or appeal" from "jobs you can do". It has been the observation of the current researcher that persons taking the VPI often become confused when reading job titles regarding whether they think they <u>like</u> the occupational title and whether they think they <u>could do</u> the work. For example, a subject might have a passing interest in auto mechanics but blacken N for "no" on the VPI because he didn't think he could <u>perform</u> the work, or he believed that the type of work was not a viable alternative for him. Also, the procedure which allows respondents to skip items is not recommended by Guilford (1954) since many response biases are introduced which the researcher cannot identify or control. The subject should be asked to respond in some manner to every item. Thus, the IOP instructs the subject to respond to every item and asks whether the job title is Interesting or Not Interesting.

The IOP has six a priori scales. The presumption was made that occupational titles can be classified into Holland's (1970) six categories. Holland's classification was extended to non-managerial, non-professional job titles. The six scales of the Inventory of Occupational Preference are: (1) Manual-outdoor (mechanical and laboring occupations); (2) Technical-analytical (scientific occupations); (3) Social service (educational and social welfare occupations); (4) Clerical-conformity (office and clerical occupations); (5) Business-resourcefulness (sales occupations); (6) Artistic-creative (artistic, literary and musical occupations).

Several reliability and validity studies were performed as part of the developmental process of the IOP. Small field tests were carried out in Syracuse, New York to assess the validity of the instrument. The validity of the IOP was evaluated in three ways: (1) concurrent validity was assessed by administering the IOP and Holland's VPI during one session and comparing the responses of the subjects; (2) construct validity was assessed by comparing work history of respondents with their scores on the IOP (their two-word designation); and (3) criterion-related validity was assessed by administering the IOP to a group of workers in a specific

orientation (i.e., psychiatric attendants) and comparing their classification as shown by their present job.

The reliability of the IOP was assessed for (1) temporal stability (test-retest) and (2) internal consistency (split-half reliability). The IOP was split (odd-even items) and a Pearson coefficient (Anastasi, 1968) was also calculated. For the initial reliability and validity studies of the IOP, fifty subjects were secured. The sample came from four sources: Workers (psychiatric attendants) from Syracuse Psychiatric Hospital (N=15), factory foremen at Crouse-Hinds Corporation (N=13), and teachers aids at Jefferson County, New York Association for Retarded Children (N=15), and at the Oswego County, New York Board of Cooperative Education Services (BOCES), (N=7). For the initial studies, the subject samples were drawn from the Syracuse, New York area since Syracuse industry is sufficiently diversified in terms of numbers and types of manufacturing plants to be considered characteristic of industry in New York State and in the nation (Niagara Mohawk Power Corporation, 1965).

Kuder-Richardson split-half reliability coefficients were calculated for each scale of the IOP. The Manual-outdoor, Technical-analytical, and Social service scales of the IOP have correlations of .88, .92, and .82, respectively. The Clerical-conformity, Business-resourcefulness, and Artistic-creative scales have correlations of .94, .98, and .98, respectively.

Test-retest reliability of the IOP was computed using the intraclass correlation coefficient (Robinson, 1957) and by means of the Pearson product moment correlation coefficient. The former correlation coefficient is a cuvilinear measure and reflects agreement between two variables. The Pearsonian correlation is a measure of the linear correlation between two variables. The value of the intraclass correlation coefficient depends, in part, on the value of the Pearsonian correlation but it also depends on the differences between the means and standard deviations of the two variables.

The mean test-retest (six weeks) intraclass correlation was .81 (range: .62-.89). The mean Pearson test-retest correlation was .84 (range: .77-.89). For each type of correlation, the Business-resourcefulness scale of the IOP was most reliable on six week re-test and the Artistic-creative scale was least reliable.

In order to make a preliminary assessment of the concurrent validity of the IOP, the entire sample was administered the IOP and Holland's VPI. Pearson product moment correlations between scales of the IOP and VPI which, presumably, measured similar vocational orientations were computed. Correlation coefficients for the six IOP and VPI scale orientation scales were: 1) Manual-outdoor (IOP) vs. Realistic (VPI):

r = .58; 2) Technical-analytical (IOP) vs. Investigative (VPI): r = .32; 3) Social services (IOP) vs. Social (VPI): r = .78; 4) Clerical-conformity (IOP) vs. Conventional (VPI): r = .57; 5) Business-resourcefulness (IOP) vs. Enterprising (VPI): r = .73; 6) Artistic-creative (IOP) vs. Artistic (VPI): r = .73. These results provide some evidence of the concurrent validity of the IOP. The moderate positive correlation coefficients indicate a substantial linear overlap between the IOP and VPI, yet may also indicate that, to some extent, the instruments are measuring different underlying constructs.

The construct and predictive validity of a test is the extent to which it is said to measure or predict a theoretical concept or trait (Anastasi, 1968). It was postulated that the IOP would be able to differentiate between dissimilar occupational groups since, presumably, they had different occupational interests. Some evidence of the construct validity of the IOP was obtained by comparing the group IOP profiles of the psychiatric attendants, teachers aids and factory foremen who were part of the sample. Besides having separate and distinct IOP profiles, it was noted that the psychiatric attendants and teachers aids (both classified by Holland in the Social and Artistic categories), as predicted, scored high on the IOP in these areas. The foremen, classified by Holland (1970) as Realistic, scored high on the Manual-outdoor IOP scale, which was also predicted.

Criterion-related validity of the IOP was assessed by selecting a portion of the total sample (psychiatric attendants, N=15) and comparing the classification they received on the IOP and the actual occupational classification of their present job. There was agreement, as described above, in twelve of the fifteen cases. This 80 percent agreement between measured and actual occupational classifications is acceptable as preliminary evidence of the criterion-related validity of the IOP.

In further validity studies of the IOP with substantially larger samples of adult employed workers, nultiple discriminant analysis procedures will be used to test the IOP's ability to differentiate types of workers and to evaluate the concurrent validity of the IOP. The temporal stability (test-retest reliability) of the IOP will be measured over several time periods.

In summary, the results of these preliminary studies regarding the validity and reliability of the IOP suggest that the instrument is potentially useful in evaluating the vocational preferences of non-professional, non-managerial workers. Initial evidence of the concurrent and predictive validity of the IOP has been obtained as has evidence indicating moderately high correlations with the scales of Holland's VPI.

11. Personality type

John Holland's initial statement of his vocational choice theory (Holland, 1959), his two books (1966, 1973) and all of his work on his theory are based on the premise that the vocational personality of any person can be described, essentially, by placing them into one of six categories. These categories, or personality types, are: realistic, investigative, artistic, social, enterprising, and conventional. Hollands (1973) recent book provides a description of each personality type in terms of preferred activities and interests, competencies, self-perceptions and personal characteristics.

12. Satisfaction - job

As will be noted in the discussion of the next vocational construct, job satisfaction and vocational satisfaction are distinct concepts and, as such, are measured in different ways. Whereas vocational satisfaction refers to a long-term concept of one's satisfaction with past vocational activities and history, with present vocational experiences and with future vocational expectancies, job satisfaction refers to one's feelings about a single job and about job-related events, relationships and personal attitudes.

Crites' (1969) book on vocational psychology includes a very thorough chapter dealing with vocational and job satisfaction. Job satisfaction has been of interest to industrial psychologists for decades and "occupational" satisfaction has been studied by sociologists. A series of reviews by Robinson (1952, 1953, 1954, 1955, 1956, 1957, 1958) and Robinson and Connors (1959, 1960, 1961, 1962, 1963, 1966) in the Personnel and Guidance Journal may help the reader gain somewhat of a historical perspective.

Job satisfaction includes at least six different elements as part of the construct. They are satisfaction with: 1) work tasks, 2) financial rewards (salary, fringe benefits), 3) the work environment, 4) interpersonal relations (co-workers, supervisors, etc.), 5) employing agency, company or institution, and 6) personal needs, growth and development. Herzberg, et al. (1957) reviewed over 150 studies and proposed 10 major job-factor categories: 1) intrinsic aspects of the job, 2) supervision, 3) working conditions, 4) wages, 5) opportunity for advancement, 6) security, 7) company and management, 8) social aspects of the job, 9) communications, and 10) benefits.

As part of a series of Minnesota Studies in Vocational Rehabilitation, several studies of job satisfaction of blue collar, white collar and handicapped workers were

performed. Carlson, et al. (1962) indicated that job satisfaction included five components: 1) general job satisfaction, 2) satisfaction with working conditions, 3) satisfaction with supervision, 4) satisfaction with compensation, and 5) satisfaction with co-workers. Later studies by Weiss, et al. (1967) resulted in the Minnesota Satisfaction Questionnaire. The short-form (20 items) of the MSQ consists of three scales: Intrinsic satisfaction, Extrinsic satisfaction and General satisfaction. The long form of the MSQ (100 items in the Likert-scale version) includes twenty separate scales. They are: Ability Utilization, Achievement, Activity, Advancement, Authority, Company policies and practices, Compensation, Co-workers, Creativity, Independence, Moral values, Recognition, Responsibility, Security, Social service, Social status, Supervision-human relations, Supervision-technical, Variety, and Working Conditions.

Crites (1969) noted that a researcher could approach the measurement of job satisfaction by taking a global approach (typified by the MSQ short-form or Hoppock's Job Satisfaction Blank (1935, 1970) or the summative approach - such as is measured by the long-form of the MSQ. In a recent personal communication (Crites, 1973), he indicated that Hoppock's JSB correlates very highly with many other indices of job satisfaction (including the MSQ) and, in addition, it has the value of being short, uncomplicated and easy to score.

Hoppock's (1935, 1970) Job Satisfaction Blank (JSB) is designed to allow the subject to reveal his global likes and dislikes for his job. The JSB consists of four parts, each part presenting seven choices in a continuum from very positive to very negative views. The four parts are concerned with how the individual likes his job, how much of the time he feels satisfied with his job, how he feels about changing his job, and how he thinks he compares with other people. Internal consistency of the JSB revealed a split-half reliability of .87 (Crites, 1969).

Hoppock's JSB focuses on a combination of factors that evoke an "I am satisfied with my job" response from a person, hinging upon his psychological, physiological, and environmental circumstances. The individual who is administered the JSB balances a multitude of satisfactions and dissatisfactions, and arrives at a composite satisfaction with the job as a whole. When the JSB was correlated with employment status, occupational level, and age, the results were found to be meaningful (Hoppock, 1935). Hoppock's JSB is reproduced in Appendix K. The point values are placed beside each alternative, although Hoppock lists the 28 choices in sequence.

13. Satisfaction - vocational

Satisfaction with one's work activities, on-the-job relationships, past vocational progress, and future vocational potentialities all combine as vocational satisfaction (long-term, general occupational satisfaction). Vocational satisfaction is distinguished from job satisfaction in that the latter is confined to one's satisfaction with a particular set of job functions and roles, satisfaction with co-workers and supervisors and with whom one works on a day-to-day basis, and satisfaction with the employing agency or organization.

Ginzberg, et al. (1951) identified three different types of vocational satisfaction. Intrinsic satisfaction, the first of these types, is derived from two sources, one of which is described as "function pleasure". This is the pleasure which the individual gains through his actual work activities. Another type of intrinsic satisfaction has its source in the individual's sense of accomplishment and feelings of success, and the personal realization of abilities through his achievements. A second type of vocational satisfaction is termed "concomitant" satisfaction, which includes an association with the physical and psychological working conditions (clean working environment, having many fringe benefits, friendly co-workers, etc.). Extrinsic satisfactions, consisting of the tangible rewards of work--pay, bonuses, etc.--describes the third type of vocational satisfaction. Vocational satisfaction should be viewed as more than the quantitative summation of the three types of satisfactions. The scientific observer should assess the level of satisfaction achieved by the individual in relation to his expectations of satisfaction.

Crites (1969) views vocational satisfaction as the individual's satisfaction with his "life's work", as differentiated from his job satisfaction, which is confined to a particular position held at a given time. Certain situational factors, such as unfriendly co-workers, could cause dissatisfaction with an individual's job, while at the same time the individual may be satisfied with his vocational past and his expectations of his vocational future. It is this long-term vocational behavior, rather than that of a given moment, which is the focus of vocational satisfaction.

The Index of Vocational Satisfaction (IVS) attempts to measure long-term vocational satisfaction, as described above, by focusing items on past and future vocational situations, and on the expectancies of the worker and his important others. A S's score on the IVS plus his Job Satisfaction score will summate to a single vocational satisfaction score. The Inventory of Vocational Satisfaction contains 16 items, of which eight each focus on the past and the future. The items deal with

work advancement, relationships with co-workers, and intrinsic and extrinsic satisfactions. IVS items are identified as part of the Vocational Opinion Questionnaire (Section I) found in Appendix L.

14. Self-descriptions

Some of the project hypotheses call for self-descriptions by subjects for comparisons with personality patterns and other variables. Holland (1973) describes each of the six personality types consonant with his theory of vocational choice by providing, in part, a list of adjectives with which individuals in a particular personality category might describe themselves. These adjectives are, in large part, empirically derived.

For the current project, ten adjectives from each of Holland's six personality categories were selected to form a small cluster of adjectives. Those adjectives in excess of ten which might be confusing or threatening to non-professional workers were omitted. Subjects will be asked to choose one of the six groups of adjectives which most closely match their perceptions of themselves. They will then check adjectives which most describe themselves, cross out adjectives which are least like themselves and leave untouched adjectives which are somewhat like themselves. The adjective groups are:

Realistic

Conforming - agreeable
Frank - truthful, blunt
Genuine - real, sincere
Masculine
Natural
Persistent
Practical - sensible
Stable - established, unchangeable
Thrifty - economical
Uninvolved

Artistic

Complicated
Disorderly - messy
Emotional
Idealistic
Imaginative - creative
Impractical - not practical
Impulsive - spontaneous
Independent
Nonconforming
Original

Investigative

Analytical - able to look at a situation and take it apart
Cautious
Curious
Independent
Methodical - orderly
Passive - patient, inactive
Precise - acurate
Rational - reasonable, sensible
Reserved - able to hold back
Unassuming - modest, humble

Social

Cooperative
Friendly
Generous
Insightful
Kind
Persuasive
Responsible
Sociable
Tactful - clever, sensitive
Understanding

Enterprising	Conventional
Adventurous	Conforming - agreeable
Ambitious - eager	Conscientious - dedicated, careful, honest
Domineering - overbearing, masterful	Defensive - guarded
Energetic	Efficient - effective
Impulsive - spontaneous	Inflexible - stubborn, rigid
Optimistic - hopeful	Orderly, neat, organized, well-trained
Pleasure-seeking	Persistent
Self-confident	Practical - sensible
Sociable	Prudish - modest, reserved
Talkative	Self-controlled - calm

15. Socio-economic status

The non-sociologist in search of a sound, simple measure of socio-economic status will find the same measurement ambiguity and confusion in sociology as in psychology. Socio-economic status is also described as occupational status, occupational prestige and social class. Hollingshead and Redlich (1958) developed an "Index of Social Position" which was designed to estimate the positions occupied by individuals in the status structure of the community. The Index used an occupational scale, an educational scale and, initially, a residential scale to estimate a final status position. Warner (1949) developed a simple occupation classification system which resulted in a seven point status scale. Duncan (1961) recognized that no single measure of socio-economic status could meet the need of every researcher.

Building upon previous work of the National Opinion Research Center and the Census Bureau, Duncan (1961) devised a Socioeconomic Index (SEI) which would provide a useful measure of individual socioeconomic status. The SEI was constructed to correlate highly with individual age-adjusted income and education level. Duncan provided a comprehensive listing of occupations and their comparative SEI value using the 1950 Census Bureau data. As Featherman and Hauser (1973) note, "Duncan's index of socio-economic status, when applied as an attribute of a person, denotes the status accorded to the individual as the incumbent of a particular occupational role."

For the current project, Duncan's SEI index will be assigned to each S using his occupational title and Duncan's (1961) appendix.

16. Stability - vocational

Vocational stability is a construct that has been mentioned only in passing by vocational psychologists and theorists (Crites, 1969; Holland, 1966; Super, 1957). It should not be confused with job stability which is measured by ascertaining the

on the hexagonal model - i.e., from Enterprising to Artistic, or to Realistic), and 5) the interclass changer III (this refers to the person who changes from a particular environmental type to one which is directly opposite on the hexagonal model - i.e., from Enterprising to Investigative). It was believed that the type of job change (one of the above five classes) should be considered in developing the VSI since a worker who went from one job to a second job and stayed in the same three-letter VPI code would be considered more stable than a worker who went to a new job but changed his VPI code in the second and third positions, and would be more stable than any of the interclass changers.

A second factor in developing the Vocational Stability Index was job tenure. The length of time (months) in which the worker stayed on a particular job reflects his level of vocational stability. Thus, a worker who had many jobs but stayed a very short period of time on each job would be viewed as less stable than the worker who had fewer jobs and more time on each job. The number of jobs is not considered a relevant variable since, depending upon the particular type of environment in which the worker is employed, he may have to change jobs frequently. For example, the construction worker or the actor might have a series of three or four, one month jobs, but would still be considered a stable worker.

Another consideration for the VSI is the reason for leaving a job. It is expected that the stable worker would have a positive reason for leaving a job (for example, promotion to a new position, upward mobility of some sort, moving for health reasons, etc.) and the less stable might have a negative reason for leaving a job (for example, being fired or quitting a job, being demoted, etc.). A third position would be the worker who left a job because of environmental circumstances such as layoff, a company closing, etc. A complete list of reasons for each of the three categories has been developed (Appendix N).

Using the first three factors considered to be important in vocational stability (class of change between jobs, tenure on each job, and reason for leaving) a VSI formula was derived. The formula is as follows:

$VSI = (CC \times T \times RL)_1 + (CC \times T \times RL)_2 + \ldots (CC \times T \times RL)_N \div TT$, where:

VSI = Vocational Stability Index

CC = Class Change

T = Tenure in Months

RL = Reason for Leaving a Job (rating)

TT = Total Tenure

Referring to the reasons for leaving a job each worker will be assigned a rating of 5 for a positive reason, 3 for an environmental reason, and 1 for a negative reason.

Concerning class of job change, a particular rating will need to be placed in position of the CC in the formula. If the worker is a Class I - nonchanger - the rating will be 11; if the worker is a Class II - intraclass changer - the rating will be 9; if the worker is in Class III, IV or V - interclass changer - the rating will be a number equivalent to ten times the correlation given in Holland's hexagonal model, rounded off. For example, the correlation between the Conventional and Enterprising environmental types is .68. A worker who goes from Conventional to Enterprising will thus receive 7 points (which is .68 times 10 = 6.8, rounded to 7 points). The range of points for interclass changers will be from 1 point to 7 points depending upon the distance between the environmental categories. A matrix of points for interclass change are as follows:

	I	A	S	E	C
R	5	2	2	3	4
I		3	3	2	2
A			4	4	1
S				5	4
E					7

To compute the Vocational Stability Index the information concerning the three factors is entered into the formula and a particular number is computed. The ranges of numbers for the VSI is 1-55. Thus, it is expected that non-professional workers will be differentiated in terms of the level of their vocational stability.

17. Success - vocational

Starting from the assumption that "vocational success" and "vocational achievement" are synonymous terms (Crites, 1969), we will briefly consider several psychological views of the concept. According to Super (1951), "success, as the world judges it, is fruitless and empty unless it is also seen as success by the individual." This statement underscores the subjective nature of vocational success and proposes the necessity of considering both the extrinsic and intrinsic nature of the concept. For some, success may be synonymous with security, a good reputation, or monetary rewards; for others, a successful position may allow for decisiveness,

self-directiveness, and achievement. Furthermore, as stated by Dressel (1953), vocational success "involves a value judgment which must of necessity be different for different people and for different cultural patterns."

According to Lewin (1936):

> The experience of success and failure does not depend upon the achievement as such, but rather upon the relation between the achievement and the person's expectation. One can speak, in this respect, about the person's 'level of aspiration', and can say that the experience and the degree of success and failure depend upon whether the achievement is above or below the momentary level of aspiration (pp. 926-927).

Lewin's reference to the achievement of one's personal expectations is similar to Stott's (1950) notion that the "attainment of the self-chosen goal" is a critical component of vocational success. Lewin also implied that vocational success is a temporal concept which may fluctuate between high and low levels.

As a summary statement, therefore, an individual's description of his vocational success should include his vocational history and the vocational expectations he holds for the future.

To measure vocational success will require the combination of three types of research data: 1) responses by each worker to a brief questionnaire concerning his (i.e., subjective) view of his past vocational success, 2) similar information concerning his future expectations, and 3) most importantly, an objective report of the subject's work behavior.

A review of several factor analytic studies of vocational success and commentary by noted psychologists (Bingham and Freyd, 1926; Viteles, 1932; Otis, 1940; Toops, 1944; Super, 1951; Super and Crites, 1962) was used to prepare a comprehensive list of such factors. These factors have been used to develop the Vocational Success Inventory used with the current study of non-professional workers. Factors relevant to vocational success include: 1) Quality and quantity of work output, 2) Accidents on the job, 3) Salary level and salary increases, 4) Length of service on jobs (tenure), 5) Advancement on the job (promotion), 6) Level of responsibility for the work, 7) Length of training period, 8) acquisition of new skills (amount), 9) Suggestions for improvement (creativeness), 10) Orderliness, 11) Organizing abilities, 12) Ability to relate to co-workers, 13) Ability to perform various jobs, 14) Knowledge of job, versatility, and accuracy, 15) Health, 16) Skill in dealing with others, 17) Judgment, 18) Effectiveness in supervising the work, 19) Effectiveness in planning one's work, 20) Effectiveness in improving; operating efficiency,

21) Originality, adaptability and tolerance, 22) Motivation for work, 23) Resourcefulness, 24) Ability to motivate others, 25) General reputation, 26) Drive and iniative, 27) Interest and morale, 28) Loyalty to the company. Items used to measure vocational success (Appendix O), for the current research, are included in the "Vocational Opinion Questionnaire".

The objective measure of the subject's work behavior will be the Minnesota Satisfactoriness Questionnaire (Gibson, et al., 1970).

18. Work history

For this research, two questionnaires were used to gather detailed information about the S's past work experiences and to elicit anecdoted material concerning the reasons for vocational decisions. The "Background Information" form (Appendix C) is composed of five sections: 1) educational and socio-economic information, 2) current job information, 3) first full-time job information, 4) information pertinent to the S's most satisfying job, and 5) other vocational information. The "Work History Profile" contains twelve questions which focus on those jobs held by the S during the last ten years (excluding current, first and most satisfying job). For each job title, information will be elicited concerning, for example, length of employment (in months), source of job lead, reasons for taking the job, reasons for leaving, etc.

The items for the two questionnaires were generated from: 1) the hypotheses and research questions proposed for the current research, 2) previous research carried out by this researcher and his colleagues, 3) sample work history forms in several industrial psychology texts and 4) the work history forms used by Blum, et al (1969) in their study of retrospective work histories of employed adults, and by Weiss, et al. (1961) in their study of the Validity of Work Histories Obtained by Interview. In addition, it is well to note that Featherman and Hauser (1973) reported "marked ability of persons to report their occupations held five years in the past, with nearly the same reliability as they report current statuses." They "reject the implication that occupational information is subject to unusual distortion and decay as a function of time" (p. 245). A copy of the Work History Profile is found in Appendix P.

C. Sample

The population from which the sample will be drawn will consist of employed men

and women holding non-professional, non-managerial jobs (skilled, semi-skilled, unskilled, technical, clerical) who live in the northeastern part of the United States. The geographical limitation was introduced to reduce data collection costs. The methods which will be used to sample from the population will depend on the specific distribution of the subjects in companies and other places of employment within specific geographical areas, and the maximum estimated sampling precision which can be achieved with minimum cost (Scott and Wertheimer, 1962).

For this study, "non-professional worker" is defined as an employed, adult man or woman whose job title, as specified in the Dictionary of Occupational Titles (U.S. Department of Labor, 1965), does not start with codes 0 or 1 (professional and managerial) and whose level of general educational development (GED) falls between 1-4 (that is: no special training, elementary school, high school, some college, technical or business training). Persons with GED levels at 5 or 6 (college training are not included as "non-professional, non-managerial workers".

Approximately 85 male and 85 female subjects (total N=1000) will be selected for each of Holland's six personality types. Holland's Realistic occupations include skilled trades, technical and some service occupations; Investigative occupations include scientific and some technical occupations; Artistic occupations include artistic, musical, and literary occupations; Social occupations include educational and social welfare occupations; Enterprising occupations include managerial and sales occupations; Conventional occupations include office and clerical occupations.

Workers of four personality types - Realistic, Inventigative, Conventional and Enterprising - are likely to be found in industrial settings, manufacturing firms and businesses. To secure names, addresses and job titles of potential S's in Holland's Social and Artistic categories will require: 1) Contact with professional persons working in social service agencies within selected communities (known to research staff or via letter), 2) Letters to agencies and businesses (found in community telephone books) which have high probability of employing non-professionals in the two categories of interest, and 3) Advertisements in local newspapers soliciting paid volunteers for the project.

The multi-stage sampling variation of the cluster sampling procedure (Scott and Wertheimer, 1962) will be utilized. The initial procedural steps will be as follows: (1) Identification of occupations from which subjects will be sampled. Occupations from Holland's (1970) classification which represent the six personality-types will be chosen; (2) Identification of businesses, companies and other employment settings which employ persons performing the selected occupations. Directories of businesses

published by local Chamber of Commerce's, yellow pages of telephone books, Thomas' Manufacturing Directory, and other sources will be used for such identification; (3) Random selection (with back-up list) of companies which will be contacted by letter and telephone to secure cooperation with the research project and to secure a mailing list of appropriate workers and (4) Identification of workers and their job titles from company rosters.

From a large pool of potential subjects, workers will be randomly selected (approximately 15-20% more than needed in each sex-personality category) and an initial letter, with a return postal card, will be sent. Using the returned postcards with demogrphic data for each volunteer, subjects will be randomly selected with stratification on the criteria of sex and personality category. To the extent possible, age of worker will be considered so as to reflect the age groupings of American workers, in general. Follow-up letters will specify date and time of the data collection meeting and will ask subject to reconfirm their intention to participate in the study.

Subjects will be paid at the rate of $5 per hour for an estimated three hours per subject to assure both participation in the research and cooperation with the research staff.

D. Research Procedures

1. Pilot Study

In order to assess the test administration procedures and to discover other problems with research instrumentation, a pilot study was performed using 20 non-professional workers from the Syracuse metropolitan area. The workers were secured by advertising in the Syracuse University newspaper and were, predominantly, S.U. employees. There were 10 men and 10 women who fell, largely, into Holland's Realistic and Conventional categories. Most Conventional workers were clerical workers at S.U., and most Realistic workers were on the custodial or physical plant staff of the University.

The research questionnaires and inventories were grouped in the following manner: Booklet I - "Background Information" - data concerning demographic, educational, socio-economic, some work history and some vocational background information; Booklet II - "Vocational Opinion Questionnaire" - vocational satisfaction, vocational success, confidence in organization, vocational aspiration, job satisfaction,

vocational needs, self-descriptions, and chance and contingency factors in vocational decisions; Booklet III - "Personal Opinion Questionnaire" - interpersonal competency, anomy, self-acceptance, vocational maturity, and internal-external control.

Subjects also completed a "Work History Profile" for each job held in the last ten years, Holland's VPI and Salomone's IOP. At the end of the test-taking session they were given an envelope which contained a letter to their employment supervisor and a copy of the Minnesota Satisfactoriness Questionnaire.

The test taking sequence was: 1) Booklet I, 2) VPI, 3) Booklet II, 4) 15 minute coffee break, 5) Work History Profile, 6) IOP, 7) Booklet III, and 8) letter to supervisor - MSQ.

This procedure allowed the research staff to distribute inventories and questionnaires in a manner which a) limited the influence of responses to one questionnaire on another, b) provided S's with a brief rest between sets of booklets, and c) gave the test administrators time to check booklets for omissions or gross errors. Thus, several possible confounding variables (sequence effect, fatigue effect, and practice effect) were considered in determining the position of each instrument.

2. Data Collection

The selection of subjects, and the procedures for the standard administration of research inventories and questionnaires has already been described. Collection of research data which takes approximately three hours to complete will require administration of research booklets to subjects by research staff, rather than the use of the mailed questionnaire technique.

The researcher who collects data through the use of mailed questionnaire must cope with the inevitable problems associated with a) limited return of research materials by subjects, b) incomplete and/or unusable materials, and c) unknown variables related to unstandardized and uncontrolled test administration procedures. To avoid these problems, subjects will be gathered in moderate sized groups (25-30 persons) on a Saturday or Sunday morning, from approximately 8:30 to 11:30 a.m., or Saturday afternoon. Following standard administration instructions, booklets will be distributed and the test-taking will be monitored. Subjects will be compensated by check within 7-10 days following the successful completion of the inventories.

Subjects will be secured from the northeastern part of the United States (New York, New Jersey, Pennsylvania, Massachusetts, Connecticut, Maine). The geographical limitation was introduced to reduce travel costs related to data collection. Initial selection of cities in which data collection will take place include: New York City,

Syracuse, Albany, Rochester, Buffalo, Newark, Trenton, Philadelphia, Scranton, Pittsburgh, Harrisburg, Boston, New Haven, Hartford, Bangor, Portland. Each city represents both the particular metropolitan area and the surrounding smaller cities and towns.

Given decision regarding the cities in which data collection will take place and the dates for each city, a meeting place (hotel meeting room or university conference room) will be arranged.

3. Data Processing and Coding

As Taylor and Bowers (1972) noted, questionnaires being prepared for use with large samples should be pre-coded so that keypunch operators can transcribe information directly from the questionnaires. The alternative procedure is to train coding clerks to transfer numbers from questionnaires to coding sheets. Keypunch operators can then punch and verify the information. Although the pre-coding procedure was not used with the pilot study, an effort will be made to prepare printed research booklets so that they can go directly to keypunch operators. Besides reducing data processing costs, this procedure minimizes errors which coding clerks are likely to make.

Another data processing procedure under consideration is the possibility of having questionnaire items printed directly onto answer sheets which can be scored by optical scanning machines. One limitation with the use of IBM-type answer sheets is that S's believe that the machine-readable sheets "go slower" in responding (Taylor and Bowers, 1972) than does the booklet format in which the S circles or checks an answer. An alternative procedure to the use of IBM-type answer sheets by S's, is for the coding clerks (working in pairs) to transfer questionnaire information to IBM answer sheets rather than to the keypunch coding sheets. This procedure has the advantage of allowing the research staff to program optical scanning equipment to score inventories and punch out data cards directly. Also, for questionnaire items which have stem reversals (e.g., a negative set for the item rather than a positive one), the optical reader can be programmed to add appropriate score points (high or low, forward or reversed) for each item in a particular scale.

The rationale for using negative stems on an item (i.e., I don't . . ., or It doesn't seem . . .) is to reduce a positive response set which often results in a skewed distribution of scores. Yet, Taylor and Bowers (1972) found that stem reversals may confuse S's and might introduce a bias rather than correcting a response bias. Apparently, the procedure for checking this possibility is to compare the mean

responses from negatively--and positively--worded items for substantial differences. In the current project, an examination of these potential biases will be made.

E. Statistical Analysis

One of the primary instruments is the Work History Profile (WHP). Using suggestions by Blum et al. (1969), the work history of subjects can be accurately collected and analyzed. Items in the WHP will be coded for data transferral to IBM data cards. Similarly, all other subject information will be categorized (where respondents replied to open-ended questions), coded and trasnferred to IBM cards.

The statistical techniques employed will depend on the type of data to be analyzed; whether the information is relevant to a testable hypothesis or a research questions, the kind of between-groups analyses required, and the statistical assumptions which are pre-requisites to analysis. Where applicable, the multiple discriminant analysis approach (Tatsuoka, 1971) will be used to determine the extent to which subject responses to the VPI can be used to accurately classify persons into separate groups. The Type I analysis of variance procedure (Lindquist, 1953) will be used for the comparison of groups over several related variables, such as vocational satisfaction. Following the analyses of variance, where appropriate, the Scheffe' test (Scheffe', 1959) will be used to determine the significance of differences between group means. For assessing the level or degree of relationship between variables, correlational methods will be employed.

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APPENDIXES

Appendix A

Level of Vocational Aspiration

1. Of the jobs listed in this question, which ONE would you choose to have within 10-15 years from now, if you were FREE to CHOOSE ANY of them you wished? (circle one)

1. Building Contractor
2. Clothes Presser in a Laundry
3. Dentist
4. Dock Worker
5. Economist
6. Instructor in Public Schools
7. Machine Operator in a Factory
8. Manager of a Small Store in a City
9. Minister
10. Radio Announcer
11. Scientist
12. Taxi Driver
13. Truck Driver
14. Undertaker
15. U.S. Representative in Congress

2. Of the jobs listed in this question, which is the BEST ONE you are REALLY SURE YOU COULD GET within the next few years? (circle one)

1. Biologist
2. Clerk in a Store
3. Coal Miner
4. County Judge
5. Garbage Collector
6. Head of a Department, State Gov't
7. Insurance Agent
8. Janitor
9. Lawyer
10. Mail Carrier
11. Musician, Symphony Orchestra
12. Physician
13. Policeman
14. Public School Teacher
15. Trained Machinist

3. Of the jobs listed in this question, which ONE would you choose if you were FREE to CHOOSE ANY of them you wished within the next few years? (circle one)

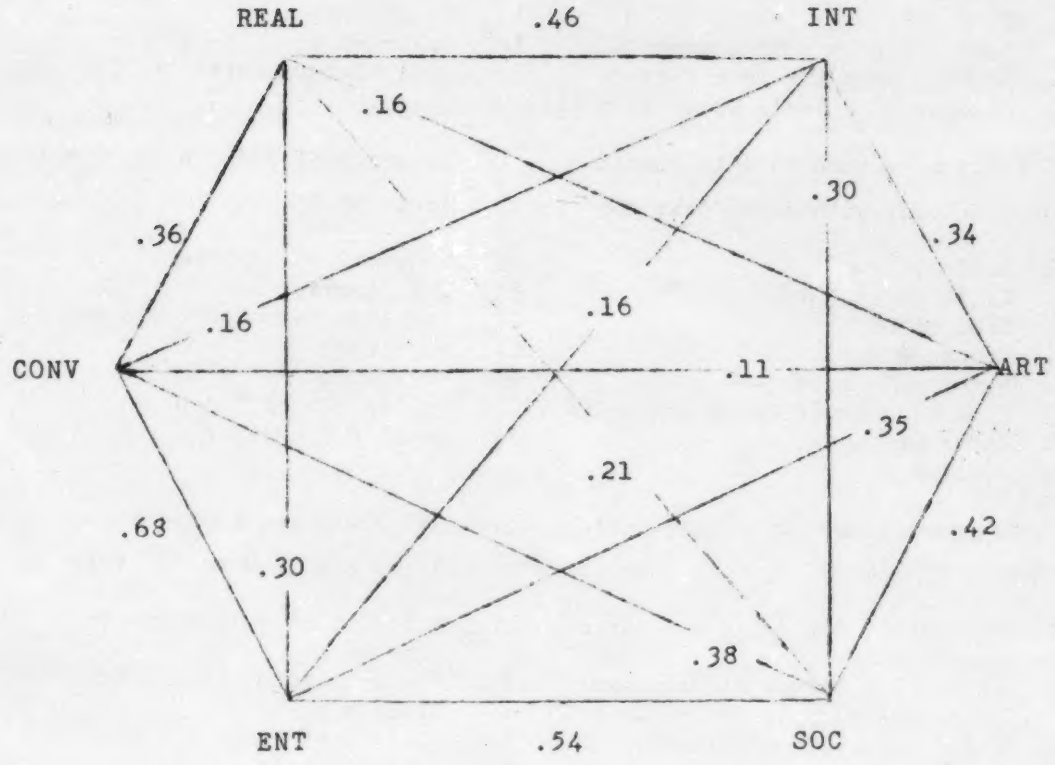
1. Accountant for a Large Business
2. Architect
3. Artist Who Paints Pictures that are Exhibited in Galleries
4. Banker
5. Bookkeeper
6. Chemist
7. Farm Hand
8. Night Watchman
9. Official of an International Labor Union
10. Owner-Operator of a Lunch Stand
11. Plumber
12. Restaurant Cook
13. Soda Fountain Clerk
14. State Governor
15. U.S. Supreme Court Justice

4. Of the jobs listed in this question, which is the BEST ONE you are REALLY SURE YOU COULD HAVE within 10-15 years from now? (circle one)

1. Author of Novels
2. Barber
3. Bartender
4. Carpenter
5. Civil Engineer
6. College Professor
7. Electrician
8. Filling Station Attendant
9. Garage Mechanic
10. Milk Route Man
11. Nuclear Physicist
12. Owner of a Factory, Employs 100 People
13. Psychologist
14. Reporter on a Daily Newspaper
15. Restaurant Waiter

Appendix B

Figure 1: A Hexagonal Model for Interpreting Inter- and Intra-Class Relationships *



* Reproduced from Holland, J. L., Whitney, D. R., Cole, N. S., and Richards, J. M. Jr. An empirical occupational classification derived from a theory of personality and intended for practice and research. Iowa City, Iowa: ACT Research Report No. 29, American College Testing Program, 1969.

Appendix C

BACKGROUND INFORMATION

1. Name _____ Date _____

   Home address _____

   _____

2. Age _____ Birthdate _____ 3. Marital Status _____

4. How many years of school did you complete? (circle)

   1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
   grade school high school college

5. How many years of school did your father complete? (circle)

   1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
   grade school high school college

6. How many years of school did your mother complete? (circle)

   1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
   grade school high school college

7. What was your father's occupation when you were a high school senior?

   Job title _____

8. Did you ever study in a trade school, business school, or correspondence school?

   NO YES Which type, number of years _____

9. Have you ever done any job planning with a counselor, vocational counselor, or psychologist? NO YES Which type, when? _____

10. Are you a union member? NO YES What union? _____

11. Did you ever have any on-the-job accidents or injuries? NO YES Describe injury _____ When was injury? _____

    Did you return to the company? _____

12. How many different, FULL-time jobs have you had in the last ten years? _____

13. Please LIST the jobs you had (before your present job) in the last ten years or more. Start with your last job title and go backward.

    Last job title _____

Job before that _____

Job before that _____

Job before that _____

Job before that _____

Job before that _____

Job before that _____

Job before that _____

Job before that _____

Job before that _____

SECTION II

PRESENT JOB:

14. Title _____

15. Duties _____

_____

16. What particular factors about yourself or your situation influenced your decision to do THIS kind of work? _____

_____

_____

17. Starting date (month/year) _____

18. Company name _____

Address _____

Name of immediate supervisor _____

19. Hours _____ week

20. Current pay $_____ hour day week month (circle)

21. Starting pay $_____ hour day week month (circle)

22. Did you receive training for the job? NO YES Describe _____

_____

23. How did you find our about this job? _____

_____

24. Have you received any salary increases? NO YES How many? _____

25. Have received any promotions? NO YES Describe _____

SECTION III

FIRST FULL-TIME JOB:

26. Title _____

27. Duties _____

28. What particular factors about yourself or your situation influenced your decision to do THIS kind of work? _____

_____

_____

29. Starting date (month/year) _____ Ending date (month/year) _____

30. Did you follow your original vocational plan (job selection) after schooling? YES NO What happened? _____

_____

_____

31. What kind of job did you expect to get when you left school? Title or description _____

32. What kind of job did you hope to get when you left school? Title or description _____

33. How did you find out about your first job? _____

_____

34. Did you receive training for the job? YES NO Describe _____

_____

35. What were your reasons for taking this job? _____

_____

36. What were your reasons for leaving this job? _____

_____

37. How satisfied were you with this job? (circle)

Very Satisfied	Satisfied	Neither Satisfied nor Dissatisfied	Dissatisfied	Very Dissatisfied

38. When you first began to think seriously about the kind of work you wanted to get into -- what occupations did you consider at that time? Job titles:

1. _____
2. _____
3. _____
4. _____
5. Others _____

39. Why did you take your first job (job title in Question #26) instead of one (or more) of jobs listed above in Question #32?

_____

_____

_____

SECTION IV

MOST SATISFYING FULL-TIME JOB:

40. Title _____

41. Duties _____

_____

42. What particular factors about yourself or your situation influenced your decision to do THIS kind of work? _____

_____

_____

43. Starting date (month/year) _____ Ending date (month/year) _____

43a. How did you find out about this job? _____

_____

44. How satisfied were you with this job? (circle)

Very Satisfied Satisfied Neither Satisfied nor Dissatisfied Dissatisfied Very Dissatisfied

45. Did you receive training for this job? NO YES Describe _____

_____

46. What were your reasons for taking this job? _____ _____

_____

46a. What were your reasons for leaving this job? _____

_____

SECTION V

OTHER VOCATIONAL INFORMATION

47. What hobbies do you really work at? _____

_____

48. Please daydream for a minute--and suppose that you had a chance to begin your vocational life again. Without regard for money or other problems, what kind of work (or training) would you choose, and why? _____

_____

_____

48a. What other changes would you make, and why? _____

_____

49. Thinking about ALL the jobs you've had, what important events, people, personal matters or other factors influenced your vocational decisions MOST? _____

_____

_____

50. All in all, what would be the most IDEAL kind of work for you? Why? _____

_____

_____

Appendix D

Interpersonal Competency Scale

John L. Holland and Leonard L. Baird (1968)

1. I have a reputation for being able to cope with difficult people. (T)
2. I find it easy to talk with all kinds of people. (T)
3. I find it easy to play many roles--worker, leader, follower, church goer, athlete, traveler, etc. (T)
4. I am good at playing charades. (T)
5. People seek me out to tell me about their troubles. (T)
6. My physical endurance is greater than that of the average person my age. (T)
7. I think I have unusual skill for assessing the motivation of other workers. (T)
8. My phsical energy is greater than that of the average person my age. (T)
9. I have unusual skills for making groups, clubs, or organizations function effectively. (T)
10. If I want to, I can be a very persuasive person. (T)
11. I have a clear picture of what I am like as a person. (T)
12. I know what I want to do with my life. (T)
13. My physical health is excellent. (T)
14. My friends think that I am shrewd and insightful about other people. (T)
15. I have good coordination. (T)
16. I would enjoy being an actor (actress). (T)
17. Most of the time, I have an optimistic outlook. (T)
18. My friends regard me as a person with good practical judgment. (T)
19. I am seldom ill. (T)
20. I believe I have good practical judgment. (T)

Appendix E

Anomy Scale

H. McClosky and J. H. Schaar (1965)

1. Everything changes so quickly these days that I often have trouble deciding which are the right rules to follow. (T)
2. People were better off in the old days when everyone knew just how he was expected to act. (T)
3. With everything so uncertain these days, it almost seems as though anything could happen. (T)
4. What is lacking in the world today is the old kind of friendship that lasted for a lifetime. (T)
5. I often feel awkward and out of place. (T)
6. It seems to me that other people find it easier to decide what is right than I do. (T)
7. With everything in such a state of disorder, it's hard for a person to know where he stands from one day to the next. (T)
8. The trouble with the world today is that most people really don't believe in anything. (T)
9. I often feel that many things our parents stood for are just going to ruin before our very eyes. (T)

Appendix F

Self-Acceptance Scale

E. M. Berger (1952) - modified

1. I'd like it if I could find someone who would tell me how to solve my personal problems. (F)
2. I don't question my worth as a person, even if I think others do. (T)
3. When people say nice things about me, I find it difficult to believe they really mean it. I think maybe they're kidding me or just aren't being sincere. (F)
4. If there is any criticism or anyone says anything about me, I just can't take it. (F)
5. I don't say much at social affairs because I'm afraid that people will criticize me or laugh if I say the wrong thing. (F)
6. I realize that I'm not living very effectively but I just don't believe I've got it in me to use my energies in better ways. (F)
7. I look on most of the feelings and impulses I have toward people as being quite natural and acceptable. (T)
8. Something inside me just won't let me be satisfied with any job I've done--if it turns out well, I get a very smug feeling that this is beneath me, I shouldn't be satisfied with this, this isn't a fair test. (F)
9. I am frequently bothered by feelings of inferiority. (F)
10. Because of other people, I haven't been able to achieve as much as I should have. (F)
11. I am quite shy and self-conscious in social situations. (F)
12. In order to get along and be liked, I tend to be what people expect me to be rather than anything else. (F)
13. I seem to have a real inner strength in handling things. I'm on a pretty solid foundation and it makes me pretty sure of myself. (T)
14. I don't feel self-conscious when I'm with people who have a superior position to mine in business. (T)
15. Very often I don't try to be friendly with people because I think they won't like me. (F)
16. I feel that I'm a person of worth, on an equal plane with others. (T)
17. I can't avoid feeling guilty about the way I feel toward certain people in my life. (F)

18. I'm not afraid of meeting new people. I feel that I'm a worthwhile person and there's no reason why they should dislike me. (T)
19. I sort of only half-believe in myself. (F)
20. I think I have certain abilities and other people say so too, but I wonder if I'm not giving them an importance way beyond what they deserve. (F)
21. I feel confident that I can do something about the problems that may arise in the future. (T)
22. I guess I put on a show to impress people. I know I'm not the person I pretend to be. (F)
23. I do not worry or condemn myself if other people pass judgment against me. (T)
24. When I'm in a group I usually don't say much for fear of saying the wrong thing. (F)
25. I have a tendency to sidestep my problems. (F)
26. I feel that I'm on the same level as other people and that helps to establish good relations with them. (T)
27. I don't feel that people are apt to react differently to me than they would notmally react to other people. (T)
28. I live too much by other peoples' standards. (F)
29. When I have to address a group, I get self-conscious and have difficulty saying things well. (F)
30. If I didn't always have such hard luck, I'd accomplish much more than I have. (F)

Appendix G

Internal vs. External Control Scale

J. B. Rotter (1966) - modified

1. Many of the unhappy things in people's lives are partly due to bad luck. (E) (T)
2. People's misfortunes result from the mistakes they make. (I) (F)
3. In the long run people get the respect they deserve in this world. (I) (F)
4. Unfortunately, an individual's worth often passes unrecognized no matter how hard he tries. (E) (T)
5. Without the right breaks one cannot be an effective leader. (E) (T)
6. Capable people who fail to become leaders have not taken advantage of their opportunities. (I) (F)
7. Becoming a success is a matter of hard work, luck has little or nothing to do with it. (I) (F)
8. Getting a good job depends mainly on being in the right place at the right time. (E) (T)
9. The average citizen can have an influence in government decisions. (I) (F)
10. This world is run by the few people in power, and there is not much the little guy can do about it. (E) (T)
11. When I make plans, I am almost certain that I can make them work. (I) (F)
12. It is not always wise to plan too far ahead because many things turn out to be a matter of good or bad fortune anyhow. (E) (T)
13. In my case getting what I want has little or nothing to do with luck. (I) (F)
14. Many times we might just as well decide what to do by flipping a coin. (E) (T)
15. Who gets to be the boss often depends on who was lucky enough to be in the right place first. (E) (T)
16. Getting people to do the right thing depends upon ability, luck has little or nothing to do with it. (I) (F)
17. As far as world affairs are concerned, most of us are the victims of forces we can neither understand, not control. (E) (T)
18. By taking an active part in political and social affairs the people can control world events. (I) (F)
19. Most people don't realize the extent to which their lives are controlled by accidental happenings. (E) (T)
20. There really is no such thing as "luck." (I) (F)
21. It is hard to know whether or not a person really likes you. (E) (T)

22. How many friends you have depends on how nice a person you are. (I) (F)
23. With enough effort we can wipe out political corruption. (E) (T)
24. It is difficult for people to have much control over the things politicians do in office. (I) (F)
25. Many times I feel that I have little influence over the things that happen to me. (E) (T)
26. It is impossible for me to believe that chance or luck plays an important role in my life. (I) (F)
27. People are lonely because they don't try to be friendly. (I) (F)
28. There's not much use in trying too hard to please people, if they like you, they like you. (E) (T)
29. What happens to me is my own doing. (I) (F)
30. Sometimes I feel that I don't have enough control over the direction my life is taking. (E) (T)

Appendix H

Vocational Maturity Scale *

1. A person should plan to follow the occupation his parents suggest. (F)
2. Work is dull and unpleasant. (F)
3. You should choose a job which allows you to do what you believe in. (T)
4. Once a person makes a vocational choice, he can't change his mind. (F)
5. A long as I can remember I've known what kind of work I wanted to do. (F)
6. You have to know what you are good at, and what you are poor at, before you can choose a career. (T)
7. I really want to accomplish something in my work--to make a great discovery or earn a lot of money or help a great number of people. (F)
8. The most important part of work is the pleasure which comes from doing it. (T)
9. You should choose a career carefully, then plan how to enter it. (T)
10. In order to choose a job, you should know what kind of a person you are. (T)
11. The greatest appeal of a job to me is the chance it might offer for getting ahead. (F)

* Items for this scale were modified from Crites' Vocational Development Inventory (1965) using suggestions offered by Sheppard (1971).

Appendix I

Vocational Preference Inventory

Scale and Items (sample)

John L. Holland (1965)

1. Realistic

   Master Plumber
   Fish and Wildlife Specialist
   Power Station Operator
   Surveyor
   Tree Surgeon

2. Intellectual

   Anthropologist
   Independent Research Scientist
   Chemist
   Geologist
   Astronomer

3. Social

   Personal Counselor
   Director of Welfare Agency
   Social Science Teacher
   Marriage Counselor
   Playground Director

4. Conventional

   Court Stenographer
   Financial Analyst
   Bank Examiner
   Statistician
   Quality Control Expert

5. Enterprising

   Buyer
   Stock and Bond Salesman
   Political Campaign Manager
   Industrial Relations Consultant
   Hotel Manager

6. Artistic

   Art Dealer
   Playwright
   Composer
   Author
   Symphony Conductor

Appendix J

Inventory of Occupational Preferences

Scale and Items (sample)

Paul R. Salomone (1972)

1. Artistic-Creative

   Clothes Designer
   Stage Hand
   Photographer's Helper
   Wood Crafts Worker
   Tailor/Seamstress

2. Business-Resourcefulness

   Hotel Manager's Assistant
   Real Estate Salesman/woman
   Vehicle Dispatcher
   Auctioneer
   Shoe Salesman/woman

3. Clerical-Conformity

   Bookkeeper
   Keypunch Operator
   Librarian's Helper
   Cashier
   Office Machine Operator

4. Manual-Outdoor

   Gas Station Attendant
   Welder
   Kitchen Helper
   Cook
   Auto Mechanic

5. Social Service

   Ward Attendant
   Neighborhood Youth Worker
   Social Worker Aide
   Speech Therapist Assistant
   Teacher's Aide

6. Technical-Analytic

   Lab Assistant
   Inspector
   Surgical Technician
   Repairman/woman
   Optometrist

Appendix K

Job Satisfaction Blank No. 5

by

Robert Hoppock

Choose the ONE of the following statements which best tells how well you like your job. Place a check mark (√) in front of that statement:

1 ___ I hate it. (1)
2 ___ I dislike it. (2)
3 ___ I don't like it. (3)
4 ___ I am indifferent to it. (4)
5 ___ I like it. (5)
6 ___ I am enthusiastic about it. (6)
7 ___ I love it. (7)

Check one of the following to show HOW MUCH OF THE TIME you feel satisfied with your job:

8 ___ All of the time. (7)
9 ___ Most of the time. (6)
10 ___ A good deal of the time. (5)
11 ___ About half of the time. (4)
12 ___ Occasionally. (3)
13 ___ Seldom. (2)
14 ___ Never. (1)

Check the ONE of the following which best tells how you feel about changing your job:

15 ___ I would quit this job at once if I could get anything else to do. (1)
16 ___ I would take almost any other job in which I could earn as much as I am earning now. (2)
17 ___ I would like to change both my job and my occupation. (3)
18 ___ I would like to exchange my present job for another job in the same line of work. (4)
19 ___ I am not eager to change my job, but I would do so if I could get a better job. (3)
20 ___ I cannot think of any jobs for which I would exchange mine. (2)
21 ___ I would not exchange my job for any other. (7)

Check one of the following to show how you think you compare with other people:

22 ___ No one likes his job better than I like mine. (7)
23 ___ I like my job much better than most people like theirs. (6)
24 ___ I like my job better than most people like theirs. (5)
25 ___ I like my job about as well as most people like theirs. (4)
26 ___ I dislike my job more than most people dislike theirs. (3)
27 ___ I dislike my job much more than most people dislike theirs. (2)
28 ___ No one dislikes his job more than I dislike mine. (1)

Appendix L

Index of Vocational Satisfaction

1. I am satisfied with myself concerning the progress I have made. (T)
2. I have not been trained well enough on my jobs to do the work that I was expected to do. (F)
3. I am basically satisfied with the friendliness of those I have worked with. (T)
4. I have a sense of accomplishment with the work I have done. (T)
5. I have not been satisfied with the physical surroundings of my jobs. (F)
6. I believe that I have done about as well that people who know me have expected me to do. (T)
7. For the most part, I am satisfied with the level of pay I received for the work I performed. (T)
8. I am not satisfied with the work skills and work habits I have developed. (F)
9. I will have the freedom to use my own judgment on the job. (T)
10. I will probably be satisfied with the working conditions. (T)
11. The people I work with in future jobs will be friendly and helpful. (T)
12. I probably won't be satisfied with the progress I make. (F)
13. I won't be able to reach those vocational goals which I set for myself. (F)
14. I will do about as well in my work as I think other people expect me to do. (T)
15. The work I do will make use of my skills and abilities. (T)
16. I won't have a chance to do different things on the job. (F)

Appendix M

Measure of Vocational Needs

The purpose of this section is to find out what you consider IMPORTANT in your Vocational Life. Your Vocational Life includes your present job, your past jobs and your future jobs. It includes your feelings about the actual things you do (or have done) on the job, the people you work with (or worked with), the supervisors, the company, your salary . . . ALL the different parts of your work life. Remember, your Vocational Life is not just your present job--it includes PAST, PRESENT and FUTURE work-related events, people or circumstances.

Below is a list of 20 things some people feel are IMPORTANT to their VOCATIONAL LIFE. Please put a check mark next to the 5 which are IMPORTANT to you. Then cross out 5 which are NOT IMPORTANT to you.

Remember, check 5 which are Important in your Vocational Life and cross out 5 which are NOT IMPORTANT in your Vocational Life.

_____ Doing something that makes use of my abilities.
_____ Having work which gives me a feeling of accomplishment.
_____ Being busy all the time on the job.
_____ Having a job which has opportunities for advancement.
_____ Being in a position to supervise other workers.
_____ Working for a company which has fair policies.
_____ Receiving fair wages.
_____ Working with friendly co-workers.
_____ Being allowed to try out my own ideas.
_____ Being able to work alone on the job.
_____ Doing work which I feel is not morally wrong.
_____ Getting recognition for the work I do.
_____ Making decisions on my own.
_____ Having a job which provides steady employment.
_____ Doing work which is helpful to other people.
_____ Having a position with some status.
_____ Having a supervisor who backs up his workers.
_____ Having a boss who can train his workers well.
_____ Doing something different every day.
_____ Having a job with good working conditions.

Please make certain you have checked 5 and crossed out 5. Thank you.

Appendix N

Reasons for Leaving a Job

Vocational Stability Index

Positive Reasons - those which demonstrate the subject's striving to improve either his vocational potential, his vocational position, or both. These reflect current societal (i.e., middle class) values. Each reason is rated five points on the VSI.

1. to continue or further education
2. enlistment in the military
3. offered a "better job" elsewhere
4. leaving a job for one with more pay, better working conditions, a more suitable environment, etc.
5. to avoid physically dangerous or unhealthy environment
6. to improve mental health (i.e., too much pressure)
7. promotion (i.e., from service station attendant to manager)
8. change in job shift; worker cannot change to new shift because of personal and/or family reasons
9. transferred to another job with same company

Environmental Reasons - those reasons for leaving a job over which the subject has no reasonable control. Each reason is rated three points on the VSI.

1. being drafted into the military service
2. no further means of transportation (i.e., car broke down, bus route changed)
3. being "laid off" because of lack of work, temporary work, or a slow down of production
4. physical reasons (i.e., heart attack, stroke, pregnancy, accidents)
5. loss of job because of automation
6. environmental disaster (i.e., flood, fire, etc.)
7. strike, may create need for other means of family support
8. being replaced by someone who is more qualified, being bumped by a more senior worker, or being replaced because of favoritism (i.e., boss decides to hire his son to replace you)

Negative Reasons - those reasons which imply a worker's limited desire to work, his immaturity, his negative work attitudes, or his negative work habits. These reasons reflect current societal values. Each reason is rated one point on the VSI.

1. didn't like the work (bored, uninterested, wanted to travel, etc.)
2. inability to get along with co-workers
3. inability to obey orders or follow directions (insubordination)
4. incompetency (couldn't do the work)
5. addiction (alcoholism, drug addict, etc.)
6. getting demoted
7. getting "laid off" because of negative reasons (i.e., wasn't productive on job)
8. being imprisoned
9. getting fired (no further explanation)
10. dishonesty
11. loss of driver's license, thus, no transportation to work

Appendix O

Vocational Success Inventory

1. My salary has been about as much as I expected. (T)
2. For the most part, I received the promotions I expected. (T)
3. The quality and quantity of my work has been satisfactory. (T)
4. I have not accepted all the responsibility in my jobs as I might have. (F)
5. I have found that I have the ability to get others to do the work that was expected of them. (T)
6. For the most part, I have developed new skills in each new job I held. (T)
7. For the most part, my jobs have helped me to develop "character" within myself. (T)
8. I have not always been loyal to the companies I have worked for. (F)
9. I have learned, over the years, to plan my work carefully. (T)
10. My general reputation on the job has not always been as good as it might have been. (F)
11. I have been able to get along very well with other workers. (T)
12. The length of time I held most of my jobs was not as long as what I had hoped for. (F)
13. I will be able to adjust fairly well to whatever the job demands. (T)
14. I will probably be making suggestions to my supervisor on how to improve the work. (T)
15. I probably won't have the "get up and go" that I used to have. (F)
16. My salary may not meet my expectations. (F)
17. My health will not be getting any worse. (T)
18. I won't be learning that many new skills in future jobs. (F)
19. For the most part, my on-the-job judgments will stay about the same as now. (T)
20. The quality and quantity of my work will not be as satisfactory as in the past. (F)
21. The level of my morale will be pretty high. (T)
22. My salary will be quite a bit more than in the past. (T)
23. The judgment I show on the job will be about the same as in the past. (T)
24. I will probably have quite a few responsibilities as a supervisor. (T)

Appendix P

WORK HISTORY PROFILE

Please complete a Work History Profile for EACH job you have had in the last 10 years, except for your present job, your first full time job and your most satisfying job. Describe your last job first, then the job before that, and so forth until you had covered 10 or more years backward. Thank you.

1. Job title _____

2. Duties _____

_____

3. Starting date (month/year) _____ Ending date (month/year) _____

4. How did you find out about this job? _____

_____

5. Did you receive training for the job? NO YES Describe _____

_____

6. How old were you? _____ years (nearest birthday)

7. What were your reasons for taking this job? _____

_____

8. What were your reasons for leaving this job? _____

_____ _____

9. Did you receive any pay raises on this job? NO YES How many? _____

10. Did you receive any promotions? NO YES Describe _____

_____

11. How satisfied were you with this job? (circle)

Very Satisfied	Satisfied	Neither Satisfied nor Dissatisfied	Dissatisfied	Very Dissatisfied

Appendix Q

Confidence-in-Organization Measure

Kahn, Wolfe, Quinn, Snoek, and Rosenthal (1964)

1. How well does your boss know the jobs he supervises?

   1. He knows very little about the jobs. (1)
   2. He doesn't know the jobs very well. (2)
   3. He knows the jobs fairly well. (4)
   4. He knows the jobs very well. (5)

2. How much is your boss interested in helping those who work under him get ahead in the company?

   1. He doesn't want them to get ahead. (1)
   2. He doesn't care whether they get ahead or not. (2)
   3. He is glad to see them get ahead, but he doesn't help them much. (3)
   4. He helps them get ahead, if he gets a chance. (4)
   5. He goes out of his way to help them get ahead. (5)

3. Taking it all in all, how well would you say your boss does his job?

   1. He does a poor job. (1)
   2. He does a fair job. (2)
   3. He does a good job. (3)
   4. He does a very good job. (4)
   5. He does an excellent job. (5)

4. How good would you say your boss is at dealing with the people he supervises?

   1. He is poor at handling people. (1)
   2. He is not very good at dealing with people; does other things better. (2)
   3. He is fairly good at dealing with people. (3)
   4. He is good at this--better than most. (4)
   5. He is very good at this--it's his strongest point. (5)

5. What happens when someone on your level makes a complaint about something?

   1. It's hardly ever taken care of. (1)
   2. It's often not taken care of. (2)
   3. It's usually taken care of. (4)
   4. It's almost always taken care of. (5)

In this measure the respondent's attitudes toward his superior were assumed to embody his attitudes toward company management in general and to reflect a level of work adjustment.

Respondent's confidence-in-organization score was his total score taken over these five items coded as above.

Appendix R

Minnesota Satisfactoriness Questionnaire

Sample Items

Gay, et al. (1971)

Compared to others in his work group, how well does he . . .

Follow company policies and practices?

Accept the direction of his supervisor?

Follow standard work rules and procedures?

Compared to others in his work group . . .

How good is the quality of his work?

How good is the quantity of his work?

If you could make the decision, would you . . .

Give him a pay raise?

Transfer him to a job at a higher level?

Promote him to a position of more responsibility?

Compared to others in his work group, how often does he . . .

Come late for work?

Become overexcited?

Become upset and unhappy?